## **ABSTRACT**

Some embodiments of the invention provide a method that identifies a set of routes for a net that has a set of pins in a region of a design layout. The method initially partitions the region into a number of sub-regions. It then identifies a first set of sub-regions that contains the net's pins. Based on the first set of sub-regions, the method identifies a first route that traverses a second set of sub-regions. The first and second sets of sub-regions have a particular relationship. Based on this particular relationship, the method identifies a second route from the first route, where the second route traverses the first set of sub-regions.